



**California Energy Commission**

# **North American Market Gas-Trade (NAMGas) Model: Updated Common Cases**

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## **Changes since April 24<sup>th</sup> Workshop**

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- **Demand for Natural Gas Power Generation in WECC**
- **Address Stakeholder Comment: Forecast Price Range Should Incorporate More Uncertainty**
- **Address Stakeholder Comment: CEC Gas Trade Position Differs From Other Industry Forecasts**



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### Results at a Glance

#### CEC Model Case Results, Percent Difference Versus Reference Case

Projection (year - 2025)	Henry Hub Price (2010\$/MCF)	Lower 48 Production (Bcf/d)	Lower 48 Demand (Bcf/d)	Imports from Canada (Bcf/d)	Exports to Mexico (Bcf/d)	LNG Imports (Bcf/d)	Lower 48 Exports (Bcf/d)
Reference Case	\$5.30	74.2	75.5	12.4	3.0	0.24	8.6
Low Demand/High Price Case	\$6.33(+19.4%)	70.8(-4.5%)	65.7(-12.9%)	11.6(-6.45%)	3.7(+23.3%)	0.002(-99%)	14.0(+62.8%)
High Demand/Low Price Case	\$4.44(-16.2%)	79.1(+6.6%)	82.5(+9.2%)	12.8(+3.2%)	2.9 (-3.3%)	0.09(-62.5%)	6.5(-24.4%)



## **Forecast Range With More Uncertainty**

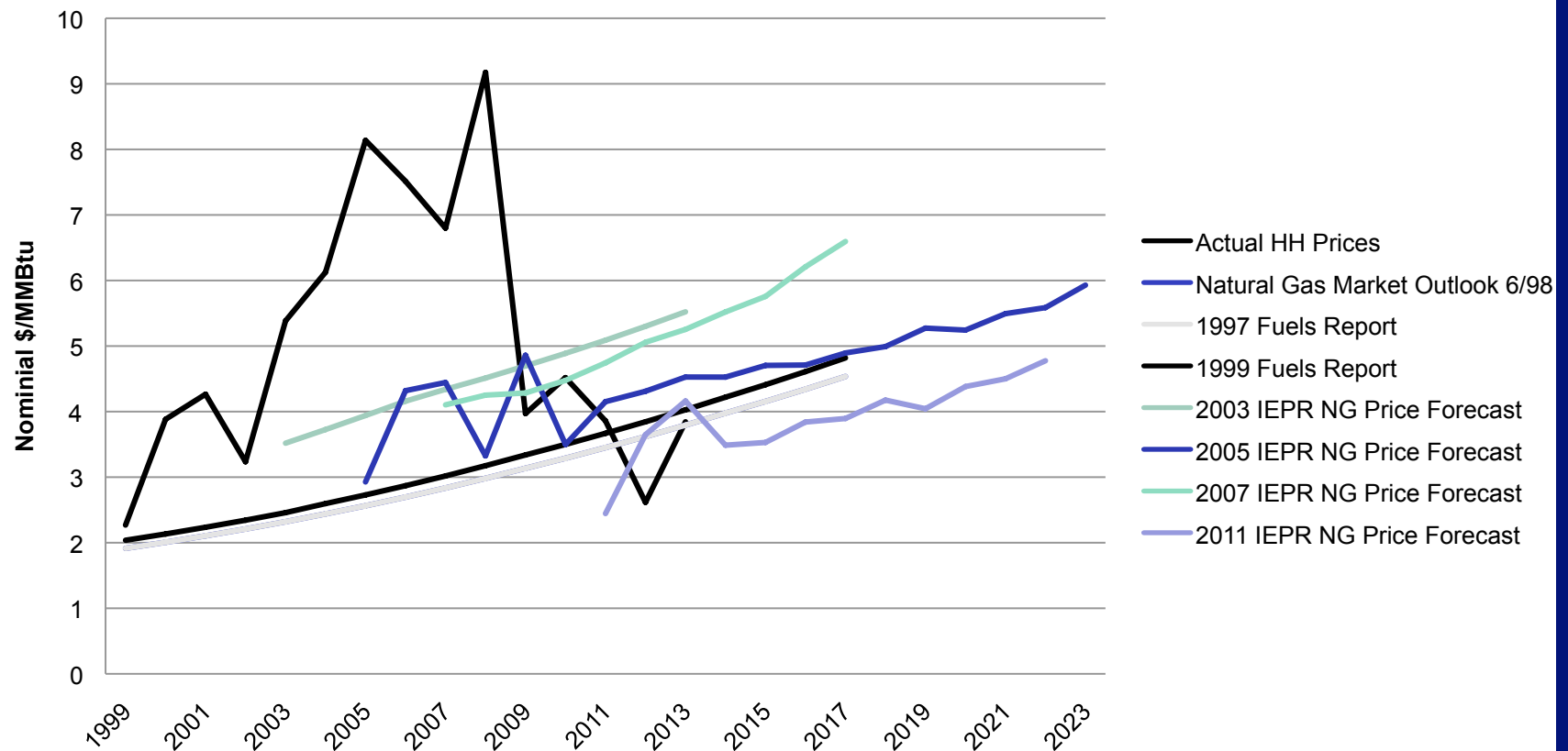
- **Stake Holder Comment: Long-term natural gas price forecast should incorporate more uncertainty**



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### Forecast Range With More Uncertainty (cont.)

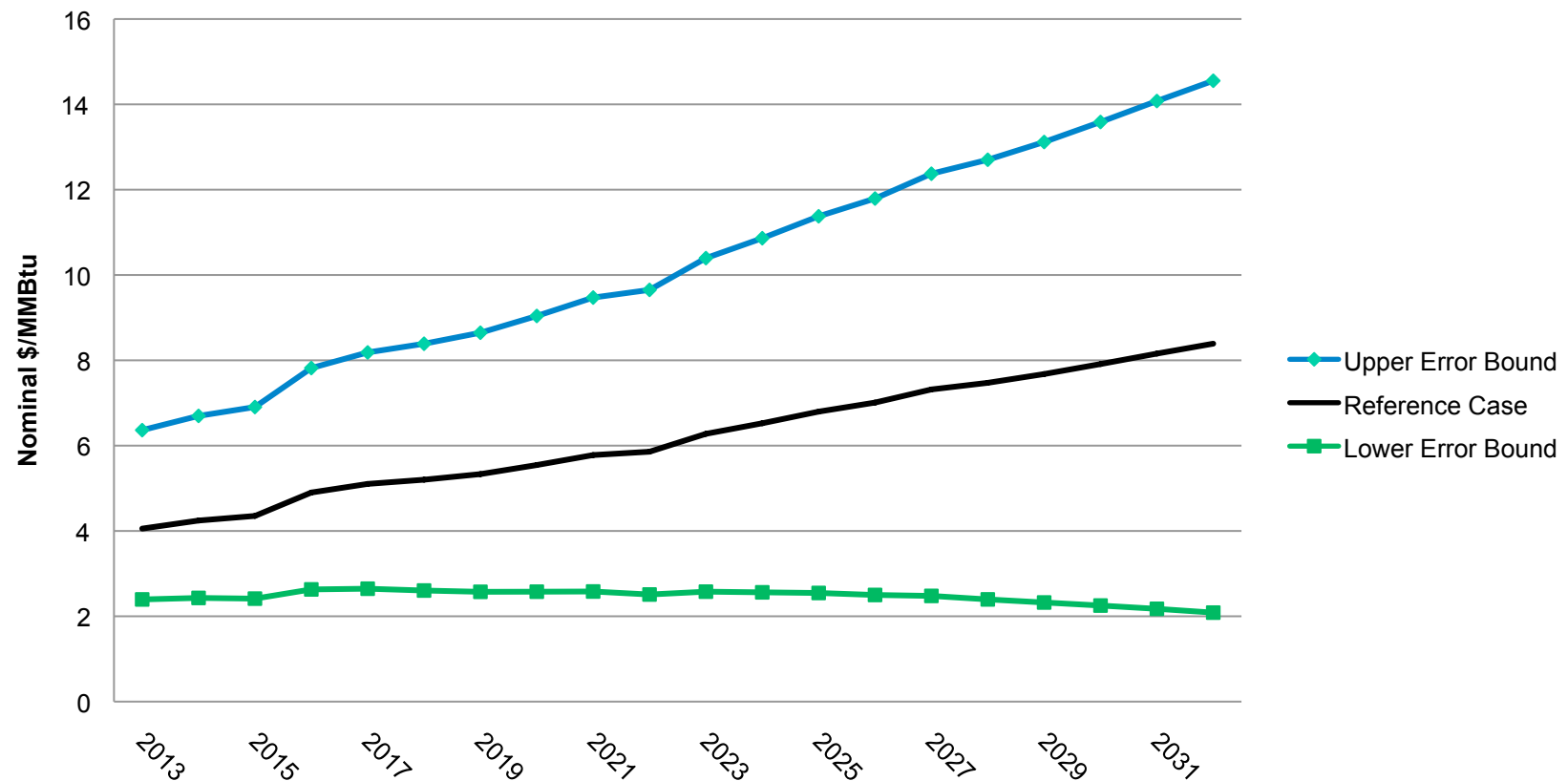
**Nominal Henry Hub Prices - Actual and Forecasted**





## Forecast Range with More Uncertainty (cont.)

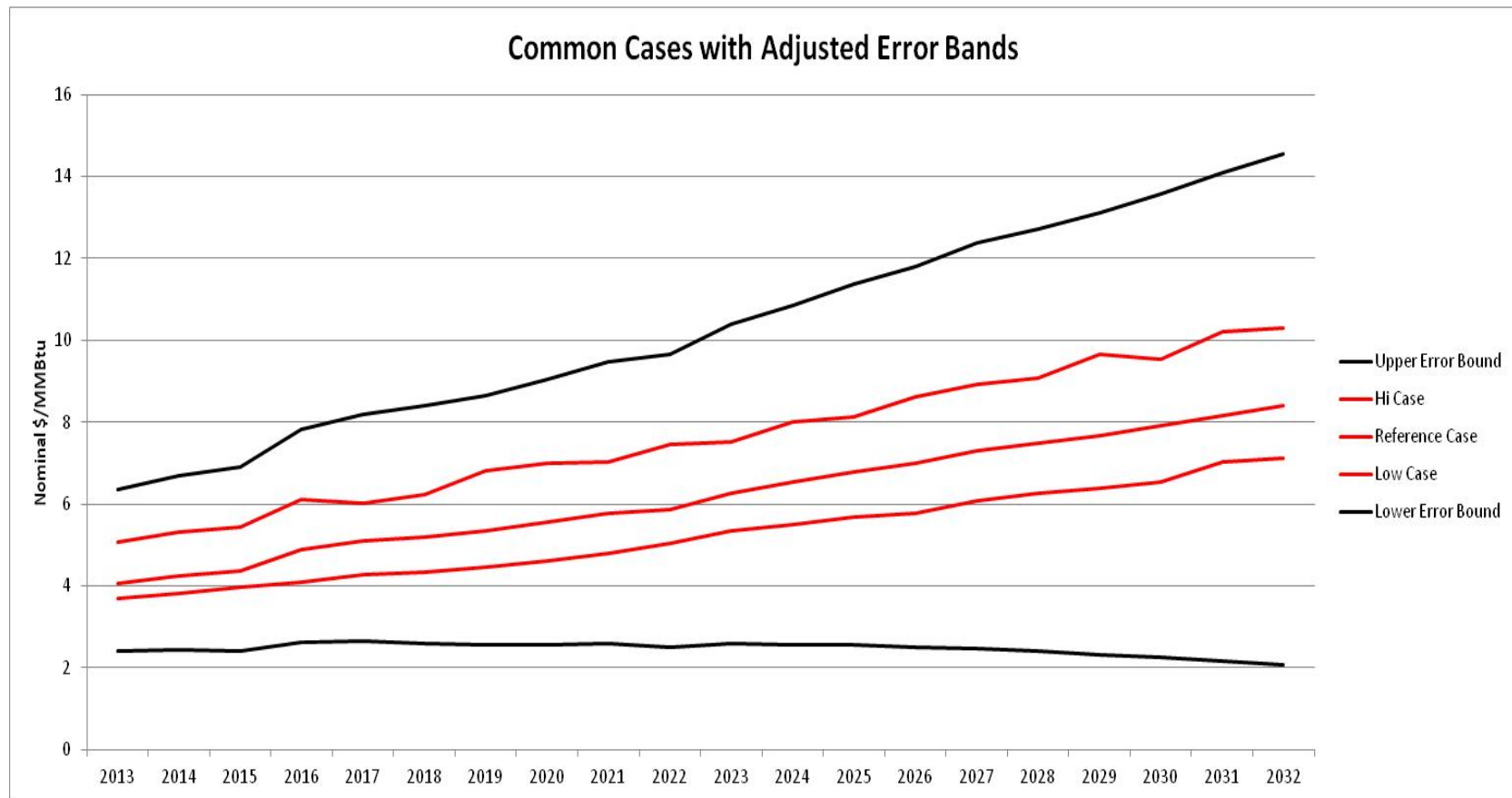
Reference Case with Adjusted Error Bands





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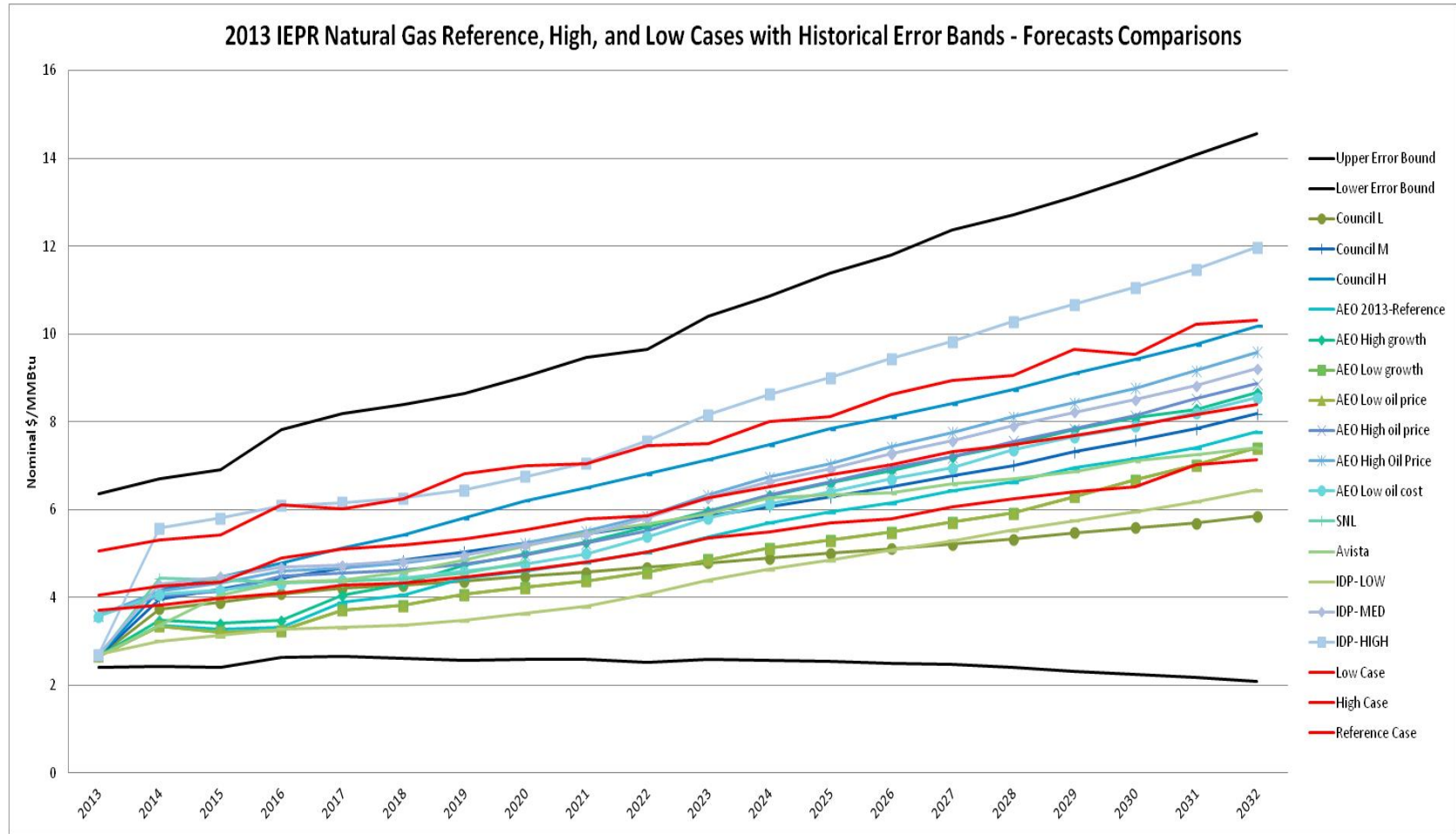
### Forecast Range with More Uncertainty (cont.)





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### Forecast Range With More Uncertainty (cont.)







## **Natural Gas Trade Position**

- **Stake Holder Comment: CEC Gas Trade Position differs from other industry forecasts**



## Natural Gas Trade Position (cont.)

### Comparison of Import/Export Projections (Tcf/yr)

<b>Projection (year - 2025)</b>	<b>EIA - AEO Reference Case</b>	<b>California Energy Commission Reference Case</b>	<b>California Energy Commission High Price/Low Demand Case</b>
Net L48 Overall Imports	-1.58	1.48	-0.87
Net Pipeline Imports	-0.52	2.25	1.8
Net LNG Imports	-1.06	-0.765	-2.67



## **Natural Gas Trade Position (cont.)**

- **CEC Reference Case assumes no additional LNG Exporting Capacity additions beyond recently approved facilities**
- **LNG Export Capacity expansion continues in the Hi Price/Low Demand Case out to the year 2017**
- **Robust pipeline imports from Canada is a result found in the CEC Common Cases**